

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 4, 5, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rätzsch et al. (WO 02/48261) in view of Skoultchi et al. (US 4,770,668).
3. The examiner provides the national stage filing of the international application, US 2005/0020750, as an English translation of WO '261. All references herein refer to US '750.
4. Regarding claims 1 and 4:
5. Rätzsch discloses aminoplast resins [0002]. Such resins include polycondensates of melamine derivatives and C₁-C₁₀ aldehydes [0014]. Rätzsch uses the resins to make microcapsules [0012]. The process to make the microcapsules includes adding the precondensates into an aqueous dispersion of a "core former", curing and then drying the microcapsules [0044].
6. Rätzsch is silent, however, with regard to an aldehyde having an ester endgroup.
7. Skoultchi discloses condensation products of cyclic amines and aldehydes, or their derivatives, to form crosslinking resins without the use of toxic formaldehyde (col 1 ln 7-15; col 2 ln 12-54). The condensation products can be formed from glyoxylic acid hemiacetals, which exhibit reactive properties over a wide pH range (col 4 ln 57-68).
8. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use glyoxylic acid hemiacetals as the aldehyde of Rätzsch's invention because it was a known functional equivalent to Rätzsch's exemplary aldehydes while avoiding the use of toxic formaldehyde, yet providing reactivity over a wide pH range.
9. Regarding claim 5:
10. The ratio of melamine derivative to aldehyde ranges from 1:1 to 1:6 [0014].
11. Regarding claim 14:
12. Skoultchi teaches the ester is preferably a methyl- or ethyl-ester (col 5 ln 32-34).

Response to Arguments

13. Applicant's arguments filed 28 Sept 2009 have been fully considered but they are not persuasive.

14. Applicant submits the "rejection is devoid of a proper § 103 analysis in support of the proposed modification" (p6). Applicant asserts the examiner provides only conclusory statements and fails "to explain on record **why** one skilled in the art would modify the disclosure of Rätzsch and Skoultchi in the manner implied" [emphasis original] (p6).

15. In response, the examiner submits the reason **why** an artisan of ordinary skill would modify Rätzsch and Skoultchi is found within the alleged "conclusory statement" noted by Applicant. The examiner submits one of ordinary skill would recognize the utility of glyoxylic acid hemiacetals as the aldehyde taught by Rätzsch *because* it was a known functionally equivalent compound that would avoid the use of toxic formaldehyde, as well as provide good reactivity over a wide pH range as taught by Skoultchi.

16. According to Applicant, the examiner's reading that Rätzsch "uses the resins to make microcapsules" is "erroneous or misleading at best" (p8). Applicant then points to Rätzsch's examples and notes "no examples of the preparation of microcapsules" (p9).

17. How the examiner's reading of Rätzsch is "erroneous or misleading" is unclear. Rätzsch states the "semifinished products and moldings [of the invention] are preferably...microcapsules" [0012]. Applicant even acknowledges that "Rätzsch mentions a process for making microcapsules" (p9). The examiner maintains his statement reflects a fair reading of Rätzsch. Regarding a lack of examples, note "applicant must look to the whole reference for what it teaches. Applicant cannot merely rely on the examples and argue that the reference did not teach others." *In re Courtright*, 377 F.2d 647, 153 USPQ 735,739 (CCPA 1967).

18. Applicant next points to the process for microencapsulation taught by Rätzsch, wherein the reference states the production "is effected by introduction of the aminoplast precondensates into...an aqueous dispersion of...capsule core formers and [a curing agent], and subsequent curing and spray-drying" [0060]. Applicant emphasizes the "subsequent curing and spray-drying" portion of this quotation and concludes "[o]ne skilled in the art would understand...that formation of capsules in the process

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disclosed by Rätzsch would occur upon curing" (p10). Therefore, Applicant submits Rätzsch teaches away from the presently claimed process, which requires step (3): "depositing amino compound (V) as a resin upon the surface of the core material to form capsules."

19. The crux of Applicant's argument appears to be that Rätzsch's process does not simultaneously deposit the amino compound and "form capsules" as in present step (3). The examiner does not find this argument persuasive for several reasons. First, Rätzsch clearly teaches adding the aminoplast precondensates into a solution as required by steps (1) and (2) of the present claims. The depositing then must occur spontaneously in the process. Second, the "formed capsules" of the present claims do not require the capsules to be fully cured, i.e. "capsules" as used by the claim merely implies the amino compound surrounds the core material, not a hard covering around a core material as commonly used in everyday speech. Note step (4) of the present claims permits "hardening" of the capsules, i.e. more fully curing the capsules. See page 7 lines 10-12 where Applicant states "[h]ardening can be done...by polymerisation [sic] of the resin in order to obtain an elastic non-sticky capsule." The material in Rätzsch would meet this limitation: the amino compound would surround the core material even before curing, otherwise upon curing there would be no capsule.

20. Applicant also states the "inclusion of the inorganic particles...[in the aqueous dispersion] in accordance with Rätzsch's disclosure...would be understood by one of skill in the art to inhibit capsule formation until curing" (p9-10). There appears to be no support for this conclusion, and it is not clear to the examiner how the inorganic particles inhibit capsule formation. As noted above "capsule" as used in step (3) encompasses the situation where the amino compound surrounds the core material, but need not be fully cured.

21. Applicant asserts "Rätzsch's required presence of inorganic particles...in addition to the core forming material and the aminoplast precondensates fails to suggest or provide motivation for the claimed process" (p10). The examiner notes the present claims use open language, i.e. "comprising," and therefore allows for the use of a curing agent of any type to be present.

22. Applicant states Rätzsch provide no motivation to use an aldehyde having an ester end group (p11). In response to Applicant's arguments against the references individually, one cannot show

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nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

23. Applicant also asserts an artisan would that "an aldehyde having an ester end group as in the claimed process is not as stable in a water soluble system as would be other aldehydes" (p11). From this, Applicant concludes one of ordinary skill would not expect success from using such an aldehyde with the process described by Rätzsch.

24. The examiner finds the argument unpersuasive. First, note "the arguments of counsel cannot take the place of evidence in the record", *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner's position that the arguments provided by the applicant regarding the instability of ester-group containing aldehydes in water must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), "the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001". Second, assuming *arguendo* that Applicant's unsubstantiated statement is correct, simply knowing such an aldehyde is "not as stable" as other aldehydes would not preclude its use. There is nothing to suggest the reactant is so unstable as to require extraordinary steps for its use with water. That Skoultschi uses water as a solvent suitable for the ester-aldehyde (col 5 ln 11) further shows one of ordinary skill would not believe the ester-aldehyde to be unsuitable for use in water. Third, were one of ordinary skill to require extraordinary steps to use the ester-aldehyde in water, no indication is given in Applicant's specification: were it so well known that the ester-aldehyde was "not as stable" in water as Applicant states, and therefore would be seen as untenable, it would seem Applicant would have mentioned how the reaction could proceed in such a medium.

25. Turning to Skoultschi Applicant submits the reference "is far removed from the claimed invention" (p11). In response to applicant's argument that Skoultschi is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In

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this case, Skoultschi relates to condensation products of cyclic amines with ester-group containing aldehydes. That Skoultschi has other intended uses for the final condensation product is immaterial. The reference's disclosure of the equivalency or interchangeability of ester-group containing aldehydes and aldehydes without ester groups would inform one of ordinary skill in the art to conclude the condensation product of melamine with an ester-group containing aldehyde would proceed, while avoiding the use of toxic formaldehyde.

26. Applicant then points to the amino compounds taught by Skoultschi and notes none include the compounds used in the present claims (p12). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

27. Applicant again notes Skoultschi uses compounds for permanent press of fabrics (p13). Again, the examiner notes Skoultschi's disclosure is reasonably pertinent to the present case. One of ordinary skill would recognize the interchangeability of the ester group-containing aldehyde and those without ester groups for use in amino condensation products. The primary reference, Rätzsch, discloses the suitability of aminoplast resins as capsule formers.

28. Applicant points to Skoultschi's teaching of the process to press fabrics and submits one could not extrapolate a procedure for making capsules from it (p14). Such procedures are not germane to the present discussion. Applicant underestimates the level of ordinary skill in the art. As noted in *KSR*, "A person of ordinary skill in the art is also a person of ordinary creativity, not an automaton," as "in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007). An artisan would not attempt to use unnecessarily Skoultschi's process to press fabric because Rätzsch already provides a process of making capsules.

29. Applicant submits the examiner's rejection is based on impermissible hindsight reconstruction (p15). In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense

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necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

30. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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